International application No.
PCT/JP03/07879

A. CLAS	SIFICATION OF SUBJECT MATTER			
Int.	.Cl ⁷ F16C19/08, 19/18, 33/78,	33/58, 33/42, 33/32, 13	3/02	
According to International Patent Classification (IPC) or to both national classification and IPC				
	S SEARCHED			
Minimum d Int.	locumentation searched (classification system followe .Cl ⁷ F16C19/08, 19/18, 33/78,	d by classification symbols) 33/58-33/64, 33/38-33/4	4,	
	33/32, 13/00-13/02		·	
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2003 Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003				
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C. DOCU	MENTS CONSIDERED TO BE RELEVANT			
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	Citation of document, with indication, where a	ppropriate, of the relevant passages	Relevant to claim No.	
A	JP 11-13771 A (NSK Ltd.),		. 1-7	
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× Furthe	er documents are listed in the continuation of Box C.	See patent family annex.		
	categories of cited documents:			
"A" document defining the general state of the art which is not		"T" later document published after the inte priority date and not in conflict with th	rnational filing date or e application but cited to	
"E" understand the principle or theory underly		erlying the invention		
date	•	considered novel or cannot be consider	red to involve an inventive	
cited to	ent which may throw doubts on priority claim(s) or which is establish the publication date of another citation or other	step when the document is taken alone document of particular relevance; the c		
speciai	reason (as specified) ent referring to an oral disclosure, use, exhibition or other	considered to involve an inventive step	when the document is	
means		combined with one or more other such combination being obvious to a person	documents, such skilled in the art	
than the	ent published prior to the international filing date but later priority date claimed	"&" document member of the same patent f	amily	
Date of the actual completion of the international search 22 September, 2003 (22.09.03)		Date of mailing of the international search report		
	(22.09.03)	07 October, 2003 (0	7.10.03)	
Name and mailing address of the ISA/		Authorized officer		
Japai	nese Patent Office			
Facsimile No.		Telephone No.		

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 183987/1986(Laid-open No. 89424/1988) (Aida Engineering, Ltd.), 10 June, 1988 (10.06.88), (Family: none)	2,7
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A	JP 57-18810 A (Yasuo UENO), 30 January, 1982 (30.01.82), (Family: none)	6-7